



CALS TEST NETWORK

CTN Test Report

91-006

AFTB-ID

90-017



Technical Publication Transfer Test with UNISYS:



MIL-M-28001 (SGML)

and



MIL-R-28002 (Raster)

Quick Short Test Report



2 April 1992



Prepared for

Air Force Materiel Command

19960826 118

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

DMC QUALITY INSPECTED 4

CTN Test Report
91-006

AFTB-ID-90-017

2 April 1992

Technical Publication Transfer

with UNISYS:

MIL-M-28001 (SGML) and

MIL-R-28002 (Raster)

Quick Short Test Report

2 April 1992

Prepared By

Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

AFTB Contact

Gary Lammers
(513) 257-3085

CTN Contact

Mel Lammers
(513) 257-3085

Prepared for

Air Force Materiel Command
CALS Test Network (AFMC/ENCT)
Wright-Patterson AFB, OH 45433-5000

DISCLAIMER

This report and those involved in its preparation do not endorse any product, process, or company stated herein. Use of these means by anyone does not imply certification by the CALS Test Network.

Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	1
2.	Test Parameters.....	2
3.	1840A Analysis.....	4
3.1.	External Packaging.....	4
3.2.	Transmission Envelope.....	4
3.2.1.	Tape Formats.....	4
3.2.2.	Declaration and Header Fields.....	4
4.	SGML Analysis.....	5
5.	Raster Analysis.....	5
6.	Conclusions and Recommendations.....	6
7.	Appendix A - Tape Tool Report Logs.....	A-1
7.1.	Tape Catalog.....	A-1
7.2.	Tape Evaluation Log.....	A-1
7.3.	Tape Validation Log.....	A-2

1. Introduction

1.1 Background

The DoD Computer-aided Acquisition and Logistics Support (CALS) Test Network (CTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The CTN is a DoD-sponsored confederation of voluntary participants from industry and government managed by the Air Force Logistics Command.

The primary objective of the CTN is to evaluate the effectiveness of the CALS standards (Standards) for technical data interchange and to demonstrate the technical capabilities and operational suitability of those Standards. Two general categories of tests are performed to evaluate the Standards, formal and informal. Formal tests are large, comprehensive tests that follow a written test plan, require specific authorization from DoD, and may take months to prepare, execute, and report.

Informal tests are used by the CTN technical staff to broaden the testing base by including representative samples of the many systems and applications used by CTN participants. They also allow the CTN staff to gain feedback from many industry and government interpretations of the Standards, to increase the base of participation in the CALS initiative, and to respond, in a timely manner, to the many requests for help that come from participants. Participants take part voluntarily and are benefited by receiving an evaluation of their latest implementation (interpretation) of the Standards, interacting with the CTN technical staff, gaining experience in use of the Standards, and developing increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test reported in this QSTR was to analyze UNISYS' interpretation and use of the CALS Standards in transferring technical publications data. UNISYS used its CALS DATALOGIC Data Interchange System to produce data in accordance with the standards and delivered it to the CTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFTB 90-17

Date of
Evaluation: 15 November 1990

Evaluator: George Elwood
Air Force CALS Test Bed
AFMC(I)/ENCT
Wright-Patterson AFB, OH

Data
Originator: UNISYS
Marcus Avenue
Great Neck, NY 11020

Data
Description: Technical Manual
1 document declaration file
1 text file
5 Raster files

Data
Source Systems:

Text/SGML	Datalogics WriterStation UNISYS 386 PC
Raster	GTX Software SUN 386i

Evaluation
Tools Used:

1840A	SUN 3/280 CTN Tapetools (v1.0) UNIX Agfa Compugraphics CALS
-------	---

AGC 96-08-2212

☐ _____ copies are being forwarded. Indicate whether Statement A, B, C, D, E, F, or X applies.

☒ DISTRIBUTION STATEMENT A:
APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED

☐ DISTRIBUTION STATEMENT B:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES ONLY; (Indicate Reason and Date). OTHER REQUESTS FOR THIS DOCUMENT SHALL BE REFERRED TO (Indicate Controlling DoD Office).

☐ DISTRIBUTION STATEMENT C:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES AND THEIR CONTRACTORS; (Indicate Reason and Date). OTHER REQUESTS FOR THIS DOCUMENT SHALL BE REFERRED TO (Indicate Controlling DoD Office).

☐ DISTRIBUTION STATEMENT D:
DISTRIBUTION AUTHORIZED TO DoD AND U.S. DoD CONTRACTORS ONLY; (Indicate Reason and Date). OTHER REQUESTS SHALL BE REFERRED TO (Indicate Controlling DoD Office).

☐ DISTRIBUTION STATEMENT E:
DISTRIBUTION AUTHORIZED TO DoD COMPONENTS ONLY; (Indicate Reason and Date). OTHER REQUESTS SHALL BE REFERRED TO (Indicate Controlling DoD Office).

☐ DISTRIBUTION STATEMENT F:
FURTHER DISSEMINATION ONLY AS DIRECTED BY (Indicate Controlling DoD Office and Date) or HIGHER DoD AUTHORITY.

☐ DISTRIBUTION STATEMENT X:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES AND PRIVATE INDIVIDUALS OR ENTERPRISES ELIGIBLE TO OBTAIN EXPORT-CONTROLLED TECHNICAL DATA IN ACCORDANCE WITH DoD DIRECTIVE 5230.25, WITHHOLDING OF UNCLASSIFIED TECHNICAL DATA FROM PUBLIC DISCLOSURE, 6 Nov 1984 (Indicate date of determination). CONTROLLING DoD OFFICE IS (Indicate Controlling DoD Office).

☐ This document was previously forwarded to DTIC on _____ (date) and the AD number is _____.

☐ In accordance with provisions of DoD instructions, the document requested is not supplied because:

☐ It will be published at a later date. (Enter approximate date, if known).

☐ Other. (Give Reason)

DoD Directive 5230.24, "Distribution Statements on Technical Documents," 18 Mar 87, contains seven distribution statements, as described briefly above. Technical Documents must be assigned distribution statements.

Per telecon with Shirley Stephens
Authorized Signature/Date *8/20/96*

Shirley Stephens
Print or Type Name
DSA 787-3085
Telephone Number

SGML Cheetah Gold 486
 Exoterica XGML
 Agfa Compugraphics CALS

Raster Sun 3/60
 CTN Raster Tools
 Agfa Compugraphics
 Rosetta Preview

**Standards
Tested:**

MIL-STD-1840A Notice 1 (1840A)
MIL-M-28001 (28001)
MIL-R-28002 Amendment 1 (28002)

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force Test Bed enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with the required magnetic tape warning label, MIL-STD-1840A, paragraph 5.3.1.3.

The tape was not enclosed in a barrier bag or barrier sheet material as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed a lack of the required label indicating the recording density as required by MIL-STD-1840A, para. 5.3.1. Some 9-track tape units require this BPI to be set manually. Enclosed in the box was a packing list showing all files that were recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the Air Force Test Bed contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

No errors were noted with the basic tape format.

3.2.2 Declaration and Header Fields

One error was found in the Document Declaration File header. In Document Declaration File D001, an Invalid change level was flagged. The error was minor and related to use of upper and lower case letters. MIL-STD-1840A, para. 5.1.1.2, shows the change level as "ORIGINAL". A suggested change to MIL-STD-1840A will be made to indicate that case sensitive systems may find differences in the value unless it is stated that the value shall be entirely in upper case.

4. SGML Analysis

The text files from this document were tested using Exoterica's XGML parser. No errors were noted when the file was parsed. While not an error, the following text was included on the DOCTYPE line. Use of this added information makes the DTD system unique. It may cause errors on other systems.

```
<!DOCTYPE doc PUBLIC "-//USA-DOD//DTD MIL-M-38784//EN" "cals$lib:cals.dtd" [
```

The document was also read into the Agfa Compugraphics CAPS CALS program. No errors were noted during the read operation on the tape. The d001t001 file was run through the parser (SOBEMAP) in the Agfa product. The only errors noted relate to the graphic call out in the file and this is not considered an error.

The SGML file was processed using the Agfa Compugraphics CALS product. It did develop a usable output. It was noted that the hard copy and screen displays called for abbreviations which were not included in the test file. This resulted in a "[ZW]" being inserted throughout the document. This is not considered an error.

5. Raster Analysis

All 5 raster images were checked using the CTN CALSTB.350 utility. Four of the five raster images could be viewed on the screen. File D001R004 caused a CORE DUMP on the Sun 3/60 when it was called up. File D001R002 and D001R005 did generate an error message "ERROR: ILLEGAL MODE CODE: PROGRAM TERMINATING." The files did display on the screen and all lines and pixels appeared to be shown.

The four files that could be displayed on the screen looked very good. There was little extraneous marking and the text and drawings appeared very sharp and clear.

The same files were read using the AGFA Compugraphics read1840A. The files were correctly read off the tape. The Agfa ccitt2caps utility would not read files correctly. By stopping the translation process before it was complete, a file was generated. This file could be viewed on the screen. The error message that displayed on the screen indicated that the number of lines in the header did not match what was translated. The error was tracked

to the padding character used by the creation software and the AFTB tape reader. The tape reader on the SUN 3/280 will strip these characters from the file making them unusable.

The files were converted using Rosetta Technologies Prepare and viewed using Preview. All images were read and displayed correctly on the screen.

6. Conclusions and Recommendations

In summary, the MIL-STD-1840A tape from UNISYS was basically correct. The tape could be read properly using the CTN TAPETOOL Software without problem. The errors in the MIL-STD-1840A headers were minor and should be corrected easily.

The raster images appeared to be generated correctly. Preview was able to display all five files without problem. The CALSTB.350 generated a core dump on file D001R004. The Agfa problem with the raster images has been tracked to the AFTB tape drive.

The tape provides both the Air Force Test Bed and UNISYS personnel a valuable learning tool.

7. Appendix A - Tape Tool Report Logs

7.1 Tape Catalog

CALS Test Network Tape Evaluation - Version 1.1

MIL-STD-1840A Tape Evaluation Catalog

Mon Nov 12 08:49:38 1990
/cals/tapetool2/Set022

Document File Set Directory:

Page: 1

File Name	File Type	Record Type	Record Length
d001	Document Declaration	D	00260
d001r001	Raster	F	00128
d001r002	Raster	F	00128
d001r003	Raster	F	00128
d001r004	Raster	F	00128
d001r005	Raster	F	00128
d001t001	Text	D	00260
d001g001	DID	D	00260

7.2 Tape Evaluation Log

No Errors Noted.

7.3 Tape Validation Log

MIL-STD-1840A Imported Document File Set Validation Log

Found file: d001

Renaming Document Declaration file: d001

Extracting 1840A Document Declaration header records...

Validating Document Declaration header records...

srcsys: Datalogics

srcdocid: None

srcrelid: NONE

chglvl: Original

*** ERROR (MIL-STD-1840A-5.1.1.2) - Invalid change level encountered
ORIGINAL should be all capital letters.

*** NOTE - Correction made in new Document Declaration header file.

dteisu: 19900810

dstsys: UNISYS

dstdocid: None

dstrelid: None

dtetrn: 19900810

dlvacc: None

filcnt: T1, R5, G1

ttlcls: UC

doccls: UC

doctyp: Technical Manual

docttl: UNISYS

<<<<<<<< NO FURTHER ERRORS NOTED >>>>>>>>>

1 error(s) was encountered during header validation.

Saving Document Declaration header file: d001_hdr

A total of 1 error(s) was encountered in document d001.

A grand total of 1 error(s) was encountered during validation.

MIL-STD-1840A File Set Validation Complete.